



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,385	08/31/2001	Kohei Kato	381KA/50339	7752

7590 04/01/2003

CROWELL & MORING, L.L.P.
P.O. BOX 14300
Washington, DC 20044-4300

EXAMINER

KIM, RICHARD H

ART UNIT	PAPER NUMBER
----------	--------------

2882

DATE MAILED: 04/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/943,385

Applicant(s)

KATO ET AL.

Examiner

Richard H Kim

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 4 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Maughan et al. (US 4,754,147).

Referring to claims 1 and 4, Maughan et al. discloses a device comprising an accelerator; and an irradiator having a collimator through which a radiation beam emitted from the accelerator passes, and irradiating the beam having passed the collimator (see abstract, col. 3, lines 10-16), the multileaf collimator comprising leaf plate driving body each including a plurality of movable leaf plates and provided respectively on one side and the other side (see Fig. 5, ref. 24, 24a, 16), the plurality of leaf plates of the leaf plate driver on one side and the plurality of leaf plates of the leaf plate drive on the other side being disposed in an opposing relation to form an irradiation field of a radiation beam between the opposing leaf plates (see Fig. 5, ref. 16), wherein each of the leaf plate driving body comprises one driving means provided in common to the plurality of leaf plates (see Fig. 5, ref. 24, 24a), and driving force transmitting means capable of transmitting driving force of the one driving means to the plurality of leaf plates at the same time and cutting off the driving force selectively for each plate (see Fig. 5, ref. 24, col. 3, lines 44-55). Further, it has been held that the recitation that an element is “capable

of' performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.

Referring to claim 3, Maughan et al. discloses a device wherein each of the leaf plate driving body further comprises holding means capable of abutting against the leaf plates to hold the leaf plates in stationary positions (see Fig. 5, ref. 18).

Referring to claim 8, it is the position of the examiner that control means for controlling the driving means and the driving force transmitting means is an inherent limitation. All intentional actions are controlled in one way or another.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 5-7 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maughan et al. in view of Pastyr et al. (US 4,794,629).

Referring to claims 2, 5 and 7 Maughan et al. discloses a device comprising an accelerator; and irradiator having a collimator through which a radiation beam emitted from the accelerator passes, and irradiating the beam having passed the collimator (see abstract, col. 3, lines 10-16), the collimator comprising leaf plate driving body each including a plurality of movable leaf plates and provided respectively on one side and the other side (see Fig. 5, ref. 24, 24a, 16), the plurality of leaf plates of the leaf plate driver on one side and the plurality of leaf

plates of the leaf plate drive on the other side being disposed in an opposing relation to form an irradiation field of a radiation beam between the opposing leaf plates (see Fig. 5, ref. 16), wherein each of the leaf plate driving body comprises one driving means provided in common to the plurality of leaf plates (see Fig. 5, ref. 24, 24a). However, the reference does not disclose a plurality of engaging/disengaging means provided in a one-to-one relation to the plurality of leaf plates and being each capable of selectively engaging and disengaging corresponding leaf plate with and from the one driving force generating means. Further, the reference does not disclose that the irradiator is a rotating irradiator.

Pastyr et al. discloses a plurality of engaging/disengaging means provided in a one-to-one relation to the plurality of leaf plates and being each capable of selectively engaging and disengaging corresponding leaf plate with and from the one driving force generating means (see Fig. 2, ref. 30). Pastyr et al. discloses a rotating irradiator (see col. 10, lines 6-16).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a plurality of engaging/disengaging means provided in a one-to-one relation to the plurality of leaf plates and being each capable of selectively engaging and disengaging corresponding leaf plate with and from the one driving force generating means since one would be motivated to improve the reliability of the device by ensuring contact between the driving means and the leaf during the movement of the leaf and release while the leaf is desired to be at a stationary position. Further, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a rotating irradiator since one would be motivated to improve the precision of the device. By rotating the collimator, one would be able to orient the shape to correspond to the orientation of the patient, thereby preventing radiation

Art Unit: 2882

from affecting an undesired area. Further, it has been held that the recitation that an element is "capable of" performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.

Referring to claim 9 and 12, it is the position of the examiner that control means for controlling the driving the one driving force generating means and the engaging/disengaging means is inherent. All intentional actions are controlled in one way or another.

Referring to claim 10, Maughan et al. discloses a device wherein each of the leaf plate driving body further comprises holding means capable of abutting against the leaf plates to hold the leaf plates in stationary positions (see Fig. 5, ref. 18).

Referring to claim 6, Maughan et al. discloses a device comprising an accelerator; and an irradiator having a collimator through which a radiation beam emitted from the accelerator passes, irradiating the beam having passed the collimator (see abstract, col. 3, lines 10-16), the multileaf collimator comprising leaf plate driving body each including a plurality of movable leaf plates and provided respectively on one side and the other side (see Fig. 5, ref. 24, 24a, 16), the plurality of leaf plates of the leaf plate driver on one side and the plurality of leaf plates of the leaf plate drive on the other side being disposed in an opposing relation to form an irradiation field of a radiation beam between the opposing leaf plates (see Fig. 5, ref. 16), wherein each of the leaf plate driving body comprises one driving means provided in common to the plurality of leaf plates (see Fig. 5, ref. 24, 24a), and driving force transmitting means capable of transmitting driving force of the one driving means to the plurality of leaf plates at the same time and cutting

Art Unit: 2882

off the driving force selectively for each plate (see Fig. 5, ref. 24, col. 3, lines 44-55). However, the reference does not disclose that the irradiator is a rotating irradiator.

Pastyr et al. discloses a rotating irradiator (see col. 10, lines 6-16).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a rotating irradiator since one would be motivated to improve the precision of the device. By rotating the collimator, one would be able to orient the shape to correspond to the orientation of the patient, thereby preventing radiation from affecting an undesired area. Further, it has been held that the recitation that an element is "capable of" performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.

Referring to claim 11, it is the position of the examiner that control means for controlling the driving means and the driving force transmitting means is an inherent limitation. All intentional actions are controlled in one way or another.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard H Kim whose telephone number is (703)305-4791. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H Kim can be reached on (703)305-3492. The fax phone numbers for the

Application/Control Number: 09/943,385

Page 7

Art Unit: 2882

organization where this application or proceeding is assigned are (703)308-7722 for regular communications and (703)308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Richard H Kim
Examiner
Art Unit 2882

RHK
March 13, 2003


ST
TECHNICAL